



FERTILITY
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of MEMPHIS

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GONADOTROPIN SUPEROVULATION THERAPY

Information for our Patients

GENERAL INFORMATION

We have recommended gonadotropins (Repronex[®], Follistim[®], or Gonal F[®]), as a treatment for your infertility. This information is to help you understand why this choice was made, what to expect from the treatment, and what complications may occur. The decision to use gonadotropin therapy involves major commitments from both you and our team. The treatment involves numerous steps and may incur significant risks if not closely monitored. Please feel free to discuss any questions you may have with our staff.

WHAT ARE GONADOTROPINS?

Gonadotropins are powerful natural compounds that consist of one or both pituitary hormones: FSH (follicle stimulating hormone) and LH (luteinizing hormone). FSH drives the ovary to ovulate by stimulating the maturation of the ovarian follicles that makes eggs. LH stimulates the release of the egg once it is mature. These substances are prepared either using recombinant DNA technology to produce a pure preparation or by extracting the hormones from the urine of postmenopausal women where they are present in large amounts.

HOW DO GONADOTROPINS HELP INFERTILE WOMEN?

Gonadotropins stimulate the ovaries to produce multiple follicles (eggs) at one time. They do this through the same mechanisms that natural FSH and LH use in an unstimulated cycle. However, the use of gonadotropins results in a higher level of FSH leading to multiple eggs being developed in the same cycle (superovulation). Intrauterine insemination (IUI) with the husband's sperm or with donor sperm (therapeutic donor insemination {TDI}) is often combined with superovulation therapy to increase the number of motile sperm available for fertilization. In order to maximize the timing of interaction between sperm and eggs, ovulation is usually triggered by giving human chorionic gonadotropin (hCG) when the follicles have reached a mature size. Human chorionic gonadotropin (hCG) is used in a single dose to trigger ovulation approximately 12 – 36 hours after the injection. By increasing both the numbers of eggs and sperm in each cycle, as well as performing the insemination of the sperm just before ovulation, we maximize the chance of conception the treatment cycle.

HOW DO I TAKE GONADOTROPINS?

Gonadotropins are self-administered as injections. Most are now injected subcutaneously, which is much easier and less painful, however some are injected into a muscle. The dosage required to induce ovulation is highly individualized and may even vary between different cycles in the same women. One ampoule contains 75 units and the starting dose usually varies between 1 to 6 ampoules per day beginning on day 3 of menstrual flow. The dose usually administered in the early evening so that the results of the tests that have been performed during the day are known.

HOW IS THE RESPONSE TO SUPEROVULATION TREATMENT MONITERED?

The response of the ovary is assessed by two techniques:

- 1) measurement of the blood concentration of estradiol (an estrogen); and,
- 2) measurement of the numbers, sizes, and location of the ovarian follicles by transvaginal ultrasound.

Estradiol is secreted into the blood by the growing ovarian follicles as they respond to the gonadotropins. By following the increase in the concentration of estradiol by blood tests and monitoring follicular size and number by transvaginal ultrasound, we may adjust the dosage of the medications. Those patients that are responding rapidly may have their dosages decreased whereas those that are responding slowly may have the dosages increased.

On the first day of superovulation therapy (usually cycle day 3), you will have the first blood test and transvaginal ultrasound. After the tests are reviewed with your physician and the dosages determined, the gonadotropins are given for 3 to 5 days. Then another blood test and ultrasound are performed to monitor your progress. The dosage of gonadotropins is adjusted as necessary, and then repeat blood tests and ultrasounds are performed as ordered by your physician. Typically, you will have a total of 3 to 4 blood test and ultrasounds during one cycle and you will take gonadotropins for approximately 7 to 14 days. When the oocytes (eggs) are mature, as confirmed by estradiol measurements and ultrasound, hCG is given to induce ovulation. For double insemination, hCG is given at 10 p.m. and IUI is performed the following two mornings. Recent studies suggest higher pregnancy rates with double inseminations. For single insemination, the hCG injection is usually given at 10 p.m. and IUI performed approximately 36 hours afterwards.

All blood specimens and transvaginal ultrasounds are performed at the 909 Ridgeway Loop Road office between the hours of 7:30 AM and 8:30 AM. After the physician has reviewed the results of these tests, you will be contacted by telephone the same day to review the results and adjust the dosage of gonadotropins, as necessary. It is vital that we have a reliable way of contacting you so that important instructions can be communicated. Through our experience, a working and secure home answering machine or voice mail is the best method and you must have either before getting started. Please check it at least once a day around 4:00 PM for our messages. Please do not call the office for these results unless you have not heard from the nurse by 4:00 PM. When the oocytes become mature, you will be instructed to take the hCG at a certain time and be scheduled for your IUI. If your menstrual period does not start within 14 days after the hCG injection, come in for a pregnancy test.

WHAT ARE THE SUCCESS RATES WITH GONADOTROPIN THERAPY

Success rates vary according to the patient's age, condition of the fallopian tube(s), as well as the presence of male factor (sperm) problems. Overall, success rates are between 18-24% per cycle. If 3 cycles are performed, there is

approximately a 50% chance that one of the 3 cycles will result in a pregnancy. It is important to discuss with your physician what your individual chances may be according to your situation.

WILL I NEED PROGESTERONE SUPPORT AFTER I HAVE TAKEN GONADOTROPINS?

Progesterone support will be prescribed after a gonadotropin cycle to help improve the chances of pregnancy, as well as maintain the pregnancy if implantation does occur. We recommend progesterone be taken as a vaginal suppository or as an intramuscular injection since progesterone taken orally is not absorbed well.

WHAT ARE THE POSSIBLE COMPLICATIONS OF GONADOTROPIN THERAPY?

Gonadotropins are powerful agents with the potential for serious complications. Although we are experienced in the use of these medications and we utilize state of the art methods to prevent complications, complications are still possible. The most common complication is multiple pregnancy. If you become pregnant with superovulation therapy, you have a 15% chance of twins. The risk of multiple pregnancy greater than twins is less than 5%, but is considered very significant. Your physician will discuss the serious issue of multiple pregnancy with you before you start treatment.

There is a small risk (<1%) of severe ovarian hyperstimulation syndrome (OHSS). The condition is characterized by ovarian enlargement, abdominal swelling, weight gain, and abdominal pain. The risk is minimized by careful ultrasound and estradiol measurements. A complete description of the most common complications is attached to this packet.

WHAT ARE THE COSTS OF GONADOTROPIN THERAPY?

Gonadotropins are expensive drugs and one ampoule, 75 units, can cost between \$45 and \$75. The gonadotropins, hCG, and/or progesterone can cost between \$1,000 and \$2,000 each month. A complete listing of estimated expenses is attached to this packet.

HOW DO I START THERAPY?

Before you start superovulation therapy, contact one of the nurses for a gonadotropin injection teaching session. You will be given a teaching video and injection kit to take home and study. **We then ask you and your partner to demonstrate to us the proper mixing and injection technique.** We will insist on this visit even if you feel it is not necessary for you, because proper mixing and injection is crucial for these expensive medications.

All of our treatments are based on the first of your menses designated cycle day 1. Please call the reproductive endocrinology nurse at (901) 767-6868 on cycle day 1 **before 2:00 PM.** If your period starts after 2:00 PM, then simply call the next day. If your period begins on a weekend or holiday, our nurse can be reached on a digital pager **between 8:00 AM and 2:00 PM.** Dial pager number (901) 418-6353 and wait for the beeps. Enter your phone number with area code. The nurse will return your call. When you speak with the nurse, she will schedule the first ultrasound and blood test on cycle day 2 or 3.

WHAT IS A TREATMENT CYCLE?

Cycle Day 1 Onset of menstrual period. Start prenatal vitamins. Call the nurse.
Cycle Day 3 Baseline transvaginal ultrasound and estradiol blood test
Cycle Day 3 to 7 With dosage from the nurse, inject _____ amps of gonadotropin per day.
Cycle Day 8 Transvaginal ultrasound and estradiol blood test. Nurse will phone with dosage for gonadotropins. She will schedule next transvaginal ultrasound and estradiol blood test. This pattern will continue until the day of hCG
Cycle Day ____ Day of hCG (usually induces ovulation within 12 to 36 hours)
 First IUI (approximately 12 hours after hCG)
 Second IUI (approximately 36 hours after hCG)
 Two days after your last IUI start vaginal progesterone 50 mg twice a day

REST CYCLE

If conception does not occur, it will be necessary to “rest” for one month to allow your hormones and follicles to return to normal. We recommend the use of urine LH ovulation test kits with IUI on your rest cycle to provide a 10% chance of pregnancy.

IN CONCLUSION

We offer superovulation for patients who suffer from certain types of infertility. The overall benefit is an improved pregnancy rate above what the couple can expect without this particular therapy. There is a risk of adverse consequences that are minimized with proper monitoring.

Remember, to notify us of your period or contact the nurse:

Call our office at (901) 767-6868 during normal business hours. Leave your name, phone number, date menstrual cycle started and the reason why you are calling. If you phone before 2:00 PM, we will call you back that day. Otherwise, we may not phone you until the next day.

On weekends or holidays, please call the weekend pager between 8:00 AM and 4:00 PM. Dial (901) 418-6353 and wait for the beeps. Enter your phone number with area code. The nurse will return your call.

If your menstrual flow starts after 2:00 PM, we will consider the next day as cycle Day 1. Simply call us the next day to schedule any tests or procedures.